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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/501,950

07/21/2004

Kyosti Valta

43289-205707

3429

26694

7590

12/02/2008

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EXAMINER

WHITE, EVERETT NMN

ART UNIT

PAPER NUMBER

1623

MAIL DATE

DELIVERY MODE

12/02/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/501,950	Applicant(s) VALTA ET AL.	
	Examiner EVERETT WHITE	Art Unit 1623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 September 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2,3 and 5-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2,3 and 5-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. In view of the Appeal Brief filed on September 8, 2008, PROSECUTION IS HEREBY REOPENED. A new ground of rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

/Shaojia Anna Jiang/

Supervisory Patent Examiner, Art Unit 1623

2. The Appeal Brief filed September 8, 2008 has been received, entered and carefully considered. The Appeal Brief affects the instant application accordingly:

- (A) Claims 1 and 4 have been canceled;
- (B) Comments regarding Office Action have been provided drawn to:
 - (I) 103(a) rejection, rendered moot by new ground of rejection over newly cited US Patent. Thus, the 103(a) rejection of record in the previous Office Action is withdrawn.

3. Claims 2, 3 and 5-33 are pending in the case.

Claim Rejections - 35 USC § 103

4. Claims 2, 3 and 5-33 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Keunecke et al (US Patent No. 5,378,827, newly cited) in view of

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Rahman et al (EP 402606, already of record) or Hill et al (US Patent No. 2,134,825, already of record).

Applicants claim a method for manufacturing cellulose carbamate, comprising: providing a mixture including cellulose, a liquid, auxiliary agent, and urea, where the liquid content in the mixture is less than 40 %; and subjecting the mixture where the liquid content is less than 40 % to mechanical working, thereby enhancing absorption of the auxiliary agent and urea to the cellulose and at least partly performing a reaction between the cellulose and urea, wherein said mechanical working comprises compressing, rubbing, and stretching the mixture a plurality of times.

The Keunecke et al patent discloses a process for the production of cellulose carbamate from cellulose and urea through the conversion of the cellulose with excess urea in an inert liquid organic reaction carrier (see abstract). The main reaction of the cellulose with urea of the Keunecke et al patent is described in step (d) thereof (see column 3, last paragraph), which involve (d-1) separating a first portion of the organic reaction carrier from the reaction mixture mechanically, (d-2) mixing the remaining reaction product with aqueous urea solution and (d-3) then evaporating the remainder of the reaction carrier together with a portion of the water in the aqueous urea solution. See the sentence bridging column 3 and 4 of the Keunecke et al patent, which discloses in step (d-2), preferably the aqueous urea solution is added in such an amount that the weight ratio of the total liquid phase to the solid cellulose carbamate in the remaining reaction product is in the range of 20 to 40. This sentence suggests a liquid content of the reaction mixture of the Keunecke et al patent that falls within the description of the liquid content recited in instant Claim 33 “where the liquid content in the mixture is less than 40%”. The Keunecke et al patent further discloses the use of a screw extruder to carry out the process thereof, which embraces the mechanical working of the reaction mixture recited in the instant claims since the instant specification at page 4, lines 30-33, discloses the mechanical working device may be an extruder.

The instantly claimed method for manufacturing cellulose carbamate differs from the method of the Keunecke et al patent by claiming the present of auxiliary agent (i.e., an alkalizing agent or hydrogen peroxide).

The Rahman et al publication and the Hill et al patent show that the present of an alkalizing agent and hydrogen peroxide in processes for preparing cellulose carbamate is known in the art. See Example IV of the Rahman et al publication wherein sodium hydroxide (alkalizing agent) is included in the preparation of cellulose aminomethanate (which is identical to cellulose carbamate). The caustic (sodium hydroxide) is used to thoroughly wet the cellulose. Also see page 2, 1st column, line 72 to 2nd column, line 13 of the Hill et al patent, wherein hydrogen peroxide may be used to control the viscosity of the solution comprising the urea-cellulose (or cellulose carbamate).

One of ordinary skill in this art would be motivated to combine the teaching of the Keunecke et al patent with the teachings of the Rahman et al publication and Hill et al patent since each of the documents disclose methods for manufacturing cellulose carbamate.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate into the process for the production of cellulose carbamate of the Keunecke et al patent an auxiliary agent such as an alkalizing agent or hydrogen peroxide in view of the recognition in the art, as evidenced by the Rahman et al publication and the Hill et al patent, that use of auxiliary agents are effective for wetting the cellulose or for controlling the viscosity of the solution comprising the cellulose carbamate.

Summary

5. All the pending claims are rejected.

Examiner's Telephone Number, Fax Number, and Other Information

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Everett White whose telephone number is 571-272-0660. The examiner can normally be reached on 9:30 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shaojia A. Jiang can be reached on 571-272-0627. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Everett White/
Examiner, Art Unit 1623

/Shaojia Anna Jiang/
Supervisory Patent Examiner, Art Unit 1623